



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Rosen *et al.*

Appl. No.: 10/023,584

Filed: December 21, 2001

For: **Antibodies To Human Vascular  
Endothelial Growth Factor 2**

Confirmation No.: 4809

Art Unit: 1647

Examiner: Landsman, Robert S.

Atty. Docket: 1488.100000Q/EKS/HCC

**Ninth Supplemental Information Disclosure Statement  
Under 37 C.F.R. § 1.97(b)**

***Mail Stop Amendment***

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms, PTO/SB/08A and PTO/SB/08B, are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Copies of documents FP1 to FP23 and NPL1 to NPL22 are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), copies of U.S. patents, documents US1 to US4, cited on the attached IDS Form, PTO/SB/08A, are not submitted.

In accordance with 37 C.F.R. § 1.98(a)(3), Applicants' undersigned representative submits the following discussion of the relevance of the non-English language document FP14 cited on Form PTO/SB/08A:

Document **FP14**, WO 98/55619, is in a foreign language. An English language abstract of document FP14 can be found on the face page of the patent.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

This Information Disclosure Statement is being filed before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Helene C. Carlson  
Agent for Applicants  
Registration No. 47,473

Date: December 28, 2005

1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

Substitute for form 1449/PTO

**NINTH SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Sheet	1	of	3
-------	---	----	---

**Complete if Known**

Application Number	10/023,584
Filing Date	December 21, 2001
First Named Inventor	Craig A. Rosen
Art Unit	1647
Examiner Name	Landsman, Robert S.
Attorney Docket Number	1488.100000O/EKS/HCC

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
	FP1	AU-710696	09-30-1999	Genentech, Inc.	
	FP2	EP-0 506477	09-30-1992	Merck & Co., Inc.	
	FP3	WO-91/02058	02-21-1991	Scios Nova Inc.	
	FP4	WO-97/00271	01-03-1997	The Regents of the University of California	
	FP5	WO-97/05250	02-13-1997	University of Helsinki	
	FP6	WO-97/08320	03-06-1997	Morphosys Gesellschaft Fur Proteinoptimier Ung MBH	
	FP7	WO-97/09427	03-13-1997	Genentech, Inc.	
	FP8	WO-97/17442	05-15-1997	Immunex Corporation	
	FP9	WO-97/19694	06-05-1997	Amgen, Inc.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* Applicant's unique citation designation number (optional). \* See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. \* Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \* For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \* Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \* Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**NINTH SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

***Complete if Known***

Application Number	10/023,584
Filing Date	December 21, 2001
First Named Inventor	Craig A. Rosen
Art Unit	1647
Examiner Name	Landsman, Robert S.
Attorney Docket Number	1488.100000Q/EKS/HCC

U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). ' See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. ' Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ' For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \* Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \* Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

Substitute for form 1449/PTO

*(Use as many sheets as necessary)*

Sheet	3	of	3
-------	---	----	---

Application Number	10/023,584
Filing Date	December 21, 2001
First Named Inventor	Craig A. Rosen
Art Unit	1647
Examiner Name	Landsman, Robert S.
Attorney Docket Number	1488.100000Q/EKS/HCC

[illegible]

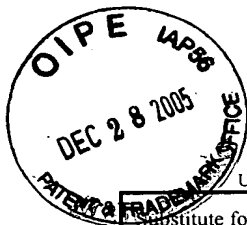
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>6</sup>
		Country Code <sup>2</sup> Number <sup>3</sup> Kind Code <sup>4</sup> (if known)			
	FP19	WO-99/21590	05-06-1999	Merck & Co.	
	FP20	WO-00/73430-A3	12-07-2000	Max-Delbrueck Centrum Fur Molekulare Medizin	
	FP21	WO-00/75163	12-14-2000	Human Genome Sciences, Inc.	
	FP22	WO-01/57226-A1	08-09-2001	Millennium Pharmaceuticals, Inc.	
	FP23	WO-01/58956-A3	08-16-2001	BASF Aktiengesellschaft	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). ' See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. ' Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ' For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \* Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \* Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>NINTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/023,584
				Filing Date	December 21, 2001
				First Named Inventor	Craig A. Rosen
				Art Unit	1647
				Examiner Name	Landsman, Robert S.
Sheet	1	of	3	Attorney Docket Number	1488.100000Q/EKS/HCC

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	NPL1	ALTSHULER <i>et al.</i> , "Taurine promotes the differentiation of a vertebrate retinal cell type in vitro," <i>Development</i> 119:1317-1328, The Company of Biologists Limited (December 1993)	
	NPL2	BOCKER-MEFFERT <i>et al.</i> , "Erythropoietin and VEGF Promote Neural Outgrowth from Retinal Explants in Postnatal Rats," <i>Invest. Ophthalmol. Vis. Sci.</i> 43:2021-2026, Association for Research in Vision and Ophthalmology (June 2002)	
	NPL3	GERHARDINGER <i>et al.</i> , "Expression of Vascular Endothelial Growth Factor in the Human Retina and in Nonproliferative Diabetic Retinopathy," <i>Am. J. Pathol.</i> 152:1453-1462, American Society for Investigative Pathology (June 1998)	
	NPL4	HANNINK <i>et al.</i> , "Deletions in the C-Terminal Coding Region of the v-sis Gene: Dimerization Is Required for Transformation" <i>Mol. And Cellular Biol.</i> 6:1304-1314, American Society for Microbiology (1986)	
	NPL5	HIRAI <i>et al.</i> , "Expression of Vascular Endothelial Growth Factors (VEGF-A/VEGF-1 and VEGF-C/VEGF-2) in Postmenopausal Uterine Endometrial Carcinoma," <i>Gynecol. Oncol.</i> 80:181-188, Academic Press (February 2001)	
	NPL6	KELLEY <i>et al.</i> , "Regulation of a Proliferation and Photoreceptor Differentiation in Fetal Human Retinal Cell Cultures," <i>Invest. Ophthalmol. Vis. Sci.</i> 36:1280-1289, Association for Research in Vision and Ophthalmology (June 1995)	
	NPL7	NGO <i>et al.</i> , "Computational Complexity, Protein Structure Prediction, and the Levinthal Paradox," in: <i>The Protein Folding Problem and Tertiary Structure Prediction</i> , Kenneth Merz, Jr. and Scott LeGrand, eds., Birkhauser, Boston, MA, pp. 491-495 (January 1994)	
	NPL8	RUDIHOFF <i>et al.</i> , "Single amino acid substitution altering antigen-binding specificity," <i>Proc. Natl. Acad. Sci. USA</i> , 79:1979-1983, National Academy of Science (1982)	
	NPL9	SCHLAEPPPI <i>et al.</i> , "Characterization of a new potent, in vivo neutralizing monoclonal antibody to human vascular endothelial growth factor." <i>J. Cancer Res. Clin. Oncol.</i> 125:336-342, Springer-Verlag (June 1999)	
	NPL10	SCHRATZBERGER <i>et al.</i> , "Reversal of experimental diabetic neuropathy by VEGF gene transfer," <i>J. Clin. Invest.</i> 107:1083-1092, American Society for Clinical Investigation (May 2001)	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.  
This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>NINTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/023,584
				Filing Date	December 21, 2001
				First Named Inventor	Craig A. Rosen
				Art Unit	1647
				Examiner Name	Landsman, Robert S.
				Attorney Docket Number	1488.100000Q/EKS/HCC
Sheet	2	of	3		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T <sup>2</sup>
	NPL11	SCHULZ-KEY <i>et al.</i> , "Ciliary Neurotrophic Factor as a Transient Negative Regulator of Rod Development in Rat Retina," <i>Invest. Ophthalmol. Vis. Sci.</i> 43:3099-3108, Association for Research in Vision and Ophthalmology (September 2002)	
	NPL12	STACKER <i>et al.</i> , "The Vascular Endothelial Growth Factor Family: Signalling for Vascular Development," <i>Growth Factors</i> 17:1-11, Harwood Academic Publishers (March 1999)	
	NPL13	VALE <i>et al.</i> , "Percutaneous Electromechanical Mapping Demonstrates Efficacy of pVGL1 (VEGF2) in an Animal Model of Chronic Myocardial Ischemia," <i>Circulation</i> (Supplement), 100:I-22, Lippincott, Williams & Wilkins (November 1999)	
	NPL14	VALE <i>et al.</i> , "Randomized, Single-Blind, Placebo-Controlled Pilot Study of Catheter-Based Myocardial Gene Transfer for Therapeutic Angiogenesis Using Left Ventricular Electromechanical Mapping in Patients with Chronic Myocardial Ischemia," <i>Circulation</i> , 103:17:2138-2143, Lippincott, Williams & Wilkins (May 2001)	
	NPL15	VAN DER FLIER <i>et al.</i> , "Antibody neutralization of vascular endothelial growth factor (VEGF) fails to attenuate vascular permeability and brain edema in experimental pneumococcal meningitis." <i>J. Neuroimmunol.</i> 160:170-177, Elsevier B.V. (March 2005)	
	NPL16	VERMA <i>et al.</i> , "Gene therapy -- promises, problems and prospects," <i>Nature</i> 389:239-242, Nature Publishing Company (September 1997)	
	NPL17	WINKLER <i>et al.</i> , "Changing the antigen binding specificity by single point mutations of an Anti-p24 (HIV-1) antibody." <i>J. Immunol.</i> 165:4505-4514, The American Association of Immunologists (October 2000)	
	NPL18	YANG <i>et al.</i> , "Flk-1, a Receptor for Vascular Endothelial Growth Factor (VEGF), Is Expressed by Retinal Progenitor Cells," <i>J. Neurosci.</i> 16:6089-6099, Society for Neuroscience (October 1996)	
	NPL19	GenBank Accession No. S08167, PAULSSON <i>et al.</i> , "Balbiani ring 3 protein - midge ( <i>Chironomus tentans</i> )," (first available April 1993 and last updated July 2000)	
	NPL20	NCBI Entrez, GenBank Report, Accession NO. AF010302, MANDRIOTA, S.J. and PEPPER, M.S. (first available and last updated July 1997)	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*



Substitute for form 1449/PTO

**NINTH SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

***Complete if Known***

Application Number	10/023,584
Filing Date	December 21, 2001
First Named Inventor	Craig A. Rosen
Art Unit	1647
Examiner Name	Landsman, Robert S.
Attorney Docket Number	1488.100000Q/EKS/HCC

Sheet	3	of	3
-------	---	----	---

## NON PATENT LITERATURE DOCUMENTS

[illegible]

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*